

## ABSTRACT

[00054] A light emitting diode control circuit provides a plurality of series light emitting diodes (LEDs) that are fault tolerant, temperature compensated, and temperature derated. The series LEDs may be used to backlight an LCD in such applications as laptop computers, personal digital assistants, cellular telephones and automotive applications. An optional luminance compensation circuit adjusts the current through the LEDs as a function of an LED temperature to maintain a substantially consistent LED intensity. An optional temperature derating circuit reduces the current through the LEDs when the temperature reaches a threshold. The LED temperature may also be provided externally via a temperature output signal.

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